

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **07234511 A**(43) Date of publication of application: **05.09.95**

(51) Int. Cl. **G03F 7/039**
G03F 7/004
G03F 7/029
G03F 7/32
H01L 21/027

(21) Application number: **06276597**(22) Date of filing: **10.11.94**(30) Priority: **28.12.93 JP 05337434**(71) Applicant: **FUJITSU LTD**

(72) Inventor: **TAKECHI SATOSHI**
TAKAHASHI MAKOTO
KAIMOTO HIROKO

(54) **RADIATION SENSITIVE MATERIAL AND
 PATTERN FORMING METHOD**

COPYRIGHT: (C)1995,JPO

(57) Abstract:

PURPOSE: To provide a radiation sensitive material which can be used in lithography taking an excimer laser as an exposure source, and which has high sensitivity and excellent adhesive property as well as excellent transparency and etching resistance by forming the material by a specified copolymer and a material caused to generate an acid by radiation exposure.

CONSTITUTION: A radiation sensitive material is formed by a copolymer expressed by the formula and a material caused to generate an acid by radiation exposure. In the formula, R_1 and R_2 respectively indicate CH_3 or H, and at least one of R_1 and R_2 is H. R_3 indicates an alkyl group, and Y indicates the alicyclic series. The unit structure having the alicyclic series in the copolymer is preferably 40-70mol%. If the composition is under 40mol%, satisfactory dry etching resistance can not be obtained, and if it exceeds 70mol%, t-butyl unit which is photosensitive is few so that patterning is difficult.

